UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,026	01/25/2001	Andrew James Kernahan	200-1429	5925

22844 7590 07/18/2002

FORD GLOBAL TECHNOLOGIES, INC
SUITE 600 - PARKLANE TOWERS EAST
ONE PARKLANE BLVD.
DEARBORN, MI 48126

EXAMINER
GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 07/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)
	09/769,026	KERNAHAN ET AL.
	Examiner	Art Unit
	Julio C. Gonzalez	2834

-- The MAILING DATE of this communicati n appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) *24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23,25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 January 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the controller coupled to the first and second monitors as disclosed in claim 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-23, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, how is the load estimated? How would the system differentiate between the load and the energy in the battery?

In claim 2, what is the difference between the loads and the electrical components. It would seem like if the electrical components are the loads.

In claim 3, what is meant by "deriving a schedule of operation"? Is the schedule of operation changing depending on the loads and the electrical components? How is the schedule derived?

In claim 5, what is meant by the alternator "setpoint voltage"? Is this the highest voltage of the alternator? Or simply the output voltage of the alternator?

In claim 6, what are the voltage regulation classifications? How are the classifications defined? Are the voltage regulation classifications different output voltages? Modes?

In claim 7, what is providing a temperature to the battery? Is another device providing external temperature to the battery? Is the voltage regulation based on the temperature of the battery?

In claim 8, what are the strategies that are selected? What devices are the strategies affecting? The alternator? The battery? The vehicle as a whole?

In claim 9, what is a "setpoint transition strategy"? What is meant by transitioning "operation between the voltage regulation strategies"? Is the voltage changing?

In claim 16, what are the first and second monitors? Are such devices sensors? Controllers? Computer programs? An algorithm for a control system?

In claim 26, what is meant by selecting a setpoint transition strategy to transition alternator operation between the voltage regulation strategies? What are those voltage strategies? How is the alternator been transitioned? What is the setpoint transition strategy?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 10, 16, 18, 19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino in view of Kiuchi et al.

Hibino discloses a system wherein an alternator of a vehicle is controlled. Also, it is disclosed that it is known that the output voltage of an alternator is controlled based on the loads (column 1, lines 35-44). Moreover, a voltage regulation may be selected based on the loads (column 2, lines 54-63).

However, Hibino does not disclose explicitly that the alternator may be regulated by the energy available.

On the other hand, Kiuchi et al discloses for the purpose of reducing emission and vibration of a vehicle that the output of a generator may be controlled by the amount of energy available (column 2, lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a system for monitoring an amount of energy as disclosed by Hibino and to modify the invention by monitoring the output of a generator based on the energy available for the purpose of reducing emission and vibration of a vehicle as disclosed by Kiuchi et al.

5. Claims 3, 4, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino and Kiuchi et al as applied to claims 1 and 16 above, and further in view of Jabaji.

The combined system discloses all of the elements above. However, the combined system does not disclose explicitly monitoring a battery.

On the other hand, Jabaji discloses for the purpose of effectively controlling output voltages that are significantly different, that monitoring the state of charge of batteries is well known in the art (column 2, lines 28-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to modify the invention by monitoring the battery for the purpose of effectively controlling output voltages that are significantly different as disclosed by Jabaji.

6. Claims 5, 6, 8, 9, 11, 12, 14, 15, 21, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino, Kiuchi et al and Jabaji as applied to claims 4, 10, 16 above, and further in view of Tsuchiya et al.

The combined system discloses all of the elements above. However, the combined system does not disclose explicitly selecting a voltage regulation strategy.

On the other hand, Tsuchiya et al discloses for the purpose of avoiding electric power loss, a device in which the a selection may be made in order to obtain a voltage regulation, which is directly linked to the alternator (see abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to modify the invention by using a selection of voltage regulation for the purpose of avoiding electric power loss as disclosed by Tsuchiya et al.

7. Claims 7, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino, Kiuchi et al and Tsuchiya et al as applied to claims 6, 12 and 22 above, and further in view of de Savasse.

The combined system discloses all of the elements above. However, the combined system does not disclose explicitly that the voltage regulation is based on the temperature of the battery.

On the other hand, de Savasse discloses for the purpose of providing an inexpensive and precise regulation of voltage, a system wherein the voltage of an alternator is regulated based on its temperature (see abstract & column 1,lines 63-65). Moreover, a temperature sensor 4 is used.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to modify the invention by monitoring the voltage based on the temperature of the alternator for the purpose of providing an inexpensive and precise regulation of voltage as disclosed by de Savasse.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Jcg

July 12, 2002